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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,545	01/24/2002	Satoshi Kumaki	57454-334	3322

7590 12/02/2004

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600 13th Street, N.W.  
Washington, DC 20005-3096

EXAMINER
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DINH, NGOC V

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 12/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

YW

**Office Action Summary**

Application No.

10/053,545

Applicant(s)

KUMAKI ET AL.

Examiner

NGOC V DINH

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4, 7 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This Office Action is responsive to Amendment filed 08/17/04.

In this instant application, claims 1-3, 10-12 have been canceled. Claims 4-9 are presented for examination.

### PROVISIONAL APPLICATION

2. The reference Al-Shamma et al that the Examiner relies upon for rejection in this instant office action is a provisional of application No. 60/219358. However, the transitional practice for supplying a copy of a provisional application relied upon to give prior art effect under 35 U.S.C. 102(e) to a reference applied in a rejection has ended due to the Memorandum dated 10/29/2004 by the Deputy Commissioner for PTO. The Applicant is referred to website <http://portal.uspto.gov/external/portal/pair> for viewing and printing the provisional application.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4 and 7 are rejected under 35 U.S.C 103(a) as being unpatentable over Al-Shamma et al PN 6611473 in view of Shin PN 6442077.

#### **Per claim 4:**

Al-Shamma teaches a data processor comprising: a random access memory [col. 1, lines 20-25]; a processing unit [fig. 1] for carrying out data processing while accessing while accessing said random access memory; a first retain circuit for storing previous data [106, fig. 1; col. 2, lines 50-55] output by processing unit; and a subtracter [108, fig. 1; "power saving circuit 108 compares the two data to determine the number of bits by which the two data are different [col. 2, lines 55-60; col. 2, lines 64 to col. 3, line5; col. 4, lines 35-40] for taking a difference between the previous data stored in retain circuit and current data output by

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processing unit when said processing unit **Read data** from random access memory (RAM).

Al-Shamma does not teach the subtractor performs its function when said processing unit **Write data** into RAM.

Shin teaches a subtractor performs its function when said processing unit **Write data** into RAM.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further include Shin 's teaching into Al-Shamma data processor to reduce the number of output pins toggles, thus saving power consumption [Shin, abstract].

In summary both the instance application [spec. page 2, lines 1-3] and the two Prior art Al-Shamma and Shin [abstracts] teach the method for saving power consumption in a Ram by reducing the number of output pins toggles. The only difference is the instant application reduces power consumption on Write operation, while the prior arts reduce power consumption on Read operation. However, it would have been obvious to one having ordinary skill in the art to which subject matter pertains to have modified the device taught by Al-Shamma and Shin to apply it to read operation to save power consumption. Further, it is well established that it is not invention in write operation that which had previously done in read operation to achieve the same result.

**Per claim 7:**

Al-Shamma teaches a second retainer circuit [e.g., the data which is held in register 106 (previous data) is also currently on the memory output bus [col. 2, lines 50-53]; an adder for adding difference data output from RAM to previous data stored in second retain circuit [col. 2, lines 55-60; col. 3, lines 30-45; col. 4, lines 35-40].

***Allowable Subject Matter***

4. Claims 5-6, 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The primary distinction over the prior art of record of claim 6 in the instant application is the combination with the inclusion of the limitation of "... and selecting difference data output from said subtracter at a timing other than the timing detected by said first detection circuit for output".

The primary distinction over the prior art of record of claim 9 in the instant application is the combination with the inclusion of the limitation of "... and selecting the data output from said adder at a timing other than the timing detected by said second detection circuit for output".

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc Dinh whose telephone number is (571) 272-4191. The examiner can normally be reached on Monday-Friday 8:30 AM-5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald A. Sparks, can be reached on (571) 272-4201. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 272-2100 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

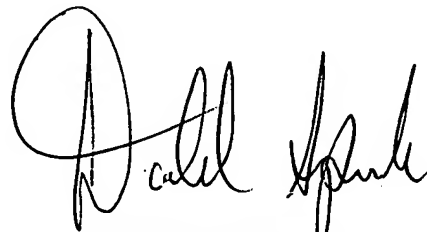


NGOC DINH

Patent Examiner

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November 23, 2004



**DONALD SPARKS  
SUPERVISORY PATENT EXAMINER**